

***Amendments to the Claims***

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently Amended) A method of configuring a multibeam satellite to enable remote monitoring of its transmissions, wherein the satellite transmits a signal in a first beam to a user terminal for receiving the signal, the method comprising configuring the satellite to transmit a copy of the signal in a second beam selected to contain a remote monitoring station for monitoring the copy, wherein the copy is transmitted in the second beam in a channel different from that used for user data transmission to user terminals in the second beam.
2. (Currently Amended) The method of claim 1, wherein the copy is transmitted at a substantially lower gain than the signal.
3. (Canceled)
4. (Currently Amended) The method of claim 1 or 2 3, wherein the signal and the copy are transmitted at substantially the same frequency.
5. (Previously Amended) The method of claim 1, wherein the signal is transmitted at a first frequency and the copy is transmitted at a second frequency different from the first frequency.
6. (original) The method of claim 4-5, wherein the copy of the signal ~~and the copy of the further signal are~~ is transmitted in a channel reserved for monitoring by the remote monitoring station.
7. (Previously Amended) The method of claims 1, wherein a copy of the signal is transmitted in a plurality of different beams, including said second beam.

8. (Original) The method of claim 7, wherein the plurality of beams are selected so as each to contain a remote monitoring station for monitoring the copy.

9. (Canceled)

10. (Previously Amended) The method of claim 1, wherein the satellite is a repeater satellite configurable to convert a feeder link signal, transmitted from a terrestrial gateway to the satellite, to said signal and said copy of the signal.

11. (Previously Amended) The method of claim 1, wherein the signal contains user data addressed to the user terminal.

12. (Previously Amended) The method of claim 1, wherein the step of configuring comprises transmitting a configuration command directly or indirectly to the satellite.

13. (Previously Amended) The method of claim 1, further including transmitting directly or indirectly to the remote monitoring station channel allocation data identifying an allocation of one or more user channels within the signal such that the remote monitoring station monitors the one or more user channels.

14. (Currently Amended) A The method of claim 1 ~~configuring a multibeam satellite to enable remote monitoring of its transmissions~~, wherein the satellite additionally transmits one or more additional ~~a~~ plurality of signals in one or more ~~a~~ respective plurality of additional beams, ~~the method comprising configuring the satellite to transmit a copy of a selected one of the plurality of signals in a beam for monitoring by a remote monitoring station, and~~ wherein the satellite is periodically reconfigured to select different ones of said plurality of signal and said one or more additional signals for transmitting a copy thereof in said second beam.

15. (Currently Amended) The method of claim 14, wherein the satellite is periodically reconfigured so that each of the plurality of said signal and said one or more additional signals is monitored sequentially.

16. (Currently Amended) A method of monitoring a transmission of a signal by a multibeam satellite in a first beam, the method comprising receiving a copy of the signal in a second beam of the satellite and monitoring the copy of the signal, wherein the copy is received in the second beam in a channel different from that used for user data transmission to user terminals in the second beam.

17. (Original) The method of claim 16, wherein the copy of the signal is received at a different frequency from that of the signal.

18. (Original) The method of claim 17, wherein the copy of the signal is received in a channel reserved for monitoring.

19. (Original) The method of claim 16, wherein the copy of the signal is received at the same frequency as that of the signal, and the second beam is non-adjacent to the first beam.

20. (Previously Amended) The method of claim 16, wherein the gain of the copy is substantially lower than that of the signal.

21. (Previously Amended) The method of claim 16, wherein the signal contains user data addressed to the user terminal.

22. (Previously Amended) The method of claims 16, further including receiving channel allocation data identifying an allocation of one or more user channels within the signal, and monitoring the one or more user channels.

23. (Currently Amended) A method of monitoring a property of the earth's atmosphere, comprising configuring a multibeam satellite to transmit multiple copies of a predetermined signal in different beams thereof, receiving each of said copies at corresponding spatially diverse monitoring stations, and deriving said property from the received copies, wherein said multiple copies of the predetermined signal are transmitted in channels different from those used for user data transmission to user terminals in the respective beams.

24. (Previously Amended) A computer program arranged to perform the method of claim 1.

25.(Original) A computer program product incorporating a computer program according to claim 24.

26. (Previously Amended) Apparatus arranged to perform the method of claim 1.

27. (cancelled)